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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,229	05/07/2001	Sung Rong Jo	P0239/US/SH	8060
7590	02/23/2004		EXAMINER	
McGuire Woods LLP 1750 Tysons Boulevard, Suite 1800 Tysons Corner McLean, VA 22102-3915			BURCH, MELODY M	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/849,229	JO, SUNG RONG
	<b>Examiner</b>	<b>Art Unit</b>
	Melody M. Burch	3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 30 January 2004.

2a)  This action is FINAL.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1,5,7,11,14 and 22 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1,5,7,11,14 and 22 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 07 May 2001 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_.  
\_\_\_\_\_

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/4/03 has been entered.

### *Drawings*

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation of a gas opening/closing pin having an integrally formed washer-shaped boss body portion formed at a lower end of the pin and a diameter reducing portion with a tapered end portion at the upper end of the pin as claimed in claim 14 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Examiner notes that the integrally formed washer-shaped boss body portion formed at a lower end of the pin is shown in figures 12 and 13 and the diameter reducing portion with the tapered end portion at the upper end of the pin is shown in figure 11, but no embodiment with both limitations is illustrated in the drawings. In fact, in the last 4 lines on pg. 8 of the specification, Applicant admits that in the case where the washer-shaped boss body is formed, the diameter reducing portion does not need to be formed at the upper end.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Objections***

3. Claims 1, 5, 7, 11, 14, and 22 are objected to because of the following informalities:

- In line 2 from the bottom of claim 1 the phrase "the streamlined recessed portion" should be changed to --the at least one streamlined recess portion-- to maintain consistent terminology;
- In line 2 of claim 11 "the recessed portion" should be changed to --the at least one streamlined recess portion-- to maintain consistent terminology;
- In line 2 of claim 22 the phrase "streamlined recessed" should be changed to --streamlined recess-- to maintain consistent terminology.

Appropriate correction is required. The remaining claims are objected to due to their dependency from claim 1.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 5, 7, 11, 14, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claim 1. The phrase "one of an integrally formed washer-shaped boss body

portion" starting in line 6 is indefinite. The use of the phrase "one of an..." suggests that another option will be recited, however, only the integrally formed washer-shaped boss body portion option is claimed. It is unclear whether Applicant intended to list another option or Applicant intended to have the integrally formed washer-shaped boss body portion as the only option.

The remaining claims are indefinite due to their dependency from claim 1.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 5, 7, 11, 14, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5303906 to Cotter et al. in view of US Patent 3699845 to Ifield.

Re: claims 1 and 22. Cotter et al. show in figures 9 and 10 a gas opening/closing pin 20' which opens and closes a gas inlet and outlet 136 formed in a pipe holder 18 which seals one end portion of a cylinder 16 and moves the position of a piston 34 in the cylinder, wherein at least one recess portion 130 which opens the gas inlet and outlet is formed on a side of the outer peripheral surface of the central portion of the gas opening/closing pin and one of an integrally formed washer-shaped boss body portion or the bottom portion of element 126 is formed at a lower end of the opening/closing pin,

wherein the recess portion does not extend about the entire outer periphery of the central portion as shown.

Cotter et al. do not show the limitation of the at least one recess portion being streamlined.

Ifield teaches in figure 3 and in col. 2 line 59 the use of a recess portion 29 being streamlined. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the at least one recess portion of Cotter et al. to have been streamlined, as taught by Ifield, in order to provide varying flow resistances into and out of the recess portion to alter fluid flow control depending on device application.

Re: claims 5 and 7. Cotter et al., as modified, describe the invention substantially as set forth above, but are silent as to the material of the gas opening/closing pin. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pin of Cotter et al. to have been made of metal or non-metal to provide a pin that is structurally durable or non-corrosive, respectively, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Re: claim 11. Cotter et al., as modified, describe the invention substantially as set forth above, but fail to show the limitation of the at least one recess portion comprising a plurality of streamlined-shaped recesses. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the

pin of Cotter et al., as modified, to have included a plurality of streamlined recesses to increase the total amount of fluid flow through the pin since in *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.

Re: claim 14. Cotter et al., as modified, teach in figure 1 of Cotter et al. the pin (shown in figure 1 as element 20) further comprising a diameter reducing portion with a tapered end portion at the upper (or leftmost) end of the pin.

### ***Response to Arguments***

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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February 18, 2004

*Melody M. Bruch*  
2/18/04